

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Withdrawn) A method for producing profile data relating to information of a cell in the same environment, said method comprising the steps of:

a) locating a plurality of cells to a support which is capable of maintaining the cells in the same environment; and

b) monitoring a biological agent or a collection thereof on or in the cell to produce the profile data of the cell.

2. (Withdrawn) A method according to Claim 1, wherein the biological agent is a nucleic acid molecule or a molecule derived from the nucleic acid molecule.

3. (Withdrawn) A method according to Claim 1, wherein the cell is immobilized to the support by a composition comprising a) a complex with a positively charged substance and a negatively charged substance; and b) a salt.

4. (Withdrawn) A method according to Claim 1 wherein the cell is provided with an actin-acting substance.

5. (Withdrawn) A method according to Claim 1, wherein the cell is immobilized to the support by a composition comprising a) a complex with a positively charged substance and a negatively charged substance; and b) a salt, and is provided with an actin-acting substance.

6. (Withdrawn) A method according to Claim 1 wherein the biological agent is selected from the group consisting of a nucleic acid molecule, a protein, a saccharide, a lipid, a low molecule and a complex thereof.

7. (Withdrawn) A method according to Claim 1, wherein the cell is cultured at least about three days before the step of monitoring.

8. (Withdrawn) A method according to Claim 1, wherein the biological agent comprises a nucleic acid molecule encoding a gene.

9. (Withdrawn) A method according to Claim 1, wherein the profile comprises a profile for gene expression.

10. (Withdrawn) A method according to Claim 1, wherein the profile comprises a profile of an apoptosis signal.

11. (Withdrawn) A method according to Claim 1 wherein the profile is a profile for a stress signal.

12. (Withdrawn) A method according to Claim 1 wherein the profile is a profile for localization of a molecule.

13. (Withdrawn) A method according to Claim 12 wherein the molecule is detected by means selected from the group consisting of fluorescence, phosphorescence, radioactive material, and a combination thereof.

14. (Withdrawn) A method according to Claim 1 wherein the profile comprises a variation of cell morphology.

15. (Withdrawn) A method according to Claim 1 wherein the profile comprises a profile for promoters.

16. (Withdrawn) A method according to Claim 1, wherein said profile comprises a profile of a promoter dependent on a specific drug.

17. (Withdrawn) A method according to Claim 1 wherein said profile comprises a profile of a promoter dependent on a specific drug, wherein said method further comprises the step of administering the specific drug.

18. (Withdrawn) A method according to Claim 1 further comprising the step of subjecting the cell to a foreign agent.

19. (Withdrawn) A method according to Claim 18, wherein said foreign agent comprises an RNAi.

20. (Withdrawn) A method according to Claim 18, wherein said foreign agent comprises a chemical not present in a biological body.

21. (Withdrawn) A method according to Claim 1, wherein said profile comprises a profile of intermolecular interaction.

22. (Withdrawn) A method according to Claim 18, wherein said foreign agent comprises a ligand for a receptor of said cell.

23. (Withdrawn) A method according to Claim 1, wherein said profile comprises a profile of an interaction between a receptor and a ligand.

24. (Withdrawn) A method according to Claim 1, wherein said profile is a cellular form, and said method further comprises the step of giving to said cell a stimulus selected from the group consisting of overexpression, underexpression or knockdown of a gene, addition of a foreign agent and a change in the environment.

25. (Withdrawn) A method according to Claim 1, wherein said profile comprises a profile of interaction between molecules present in said cell.

26. (Withdrawn) A method according to Claim 1, further comprising the step of conducting observation using a technology selected from the group consisting of two-hybrid method, FRET and BRET.

27. (Withdrawn) A method according to Claim 1, wherein said profile comprises a profile of interaction between molecules present in said cell, wherein the method further comprises the step of conducting observation using a technology selected from the group consisting of two-hybrid method, FRET and BRET.

28. (Withdrawn) A method according to Claim 1, wherein said cell is located on said support in an array format.

29. (Withdrawn) A method according to Claim 1, wherein said cell is located on said support in an array format, and each of said plurality of cells are located at a spec of 1 mm at maximum.

30. (Withdrawn) A method according to Claim 1, wherein said profile is obtained at real time.

31. (Withdrawn) A method according to Claim 1 further comprising the step of immobilizing said cell to a solid support.

32. (Withdrawn) A method according to Claim 1, wherein said data comprises information relating to said profile.

33. (Withdrawn) A method according to Claim 1 wherein said data comprises information relating to conditions in said monitoring.

34. (Withdrawn) A method according to Claim 1 wherein said data comprises information relating to the state of said cell.

35. (Withdrawn) A method according to Claim 1 wherein said biological agent to be monitored comprises at least two types of biological agents.

36. (Withdrawn) A method according to Claim 1 wherein said biological agent to be monitored comprises at least three types of biological agents.

37. (Withdrawn) A method according to Claim 1 wherein said biological agent to be monitored comprises at least eight types of biological agents.

38. (Withdrawn) A method according to Claim 1 further comprising the step of arbitrarily selecting a biological agent.

39. (Withdrawn) A method according to Claim 1 wherein said cell is selected from the group consisting of a stem cell and a somatic cell.

40. (Withdrawn) A method according to Claim 1 wherein said support comprises a solid support.

41. (Withdrawn) A method according to Claim 1 wherein said support comprises a substrate.

42. (Withdrawn) A method according to Claim 1 wherein said biological agent is a nucleic acid molecule, and said cell is transfected with said nucleic acid molecule.

43. (Withdrawn) A method according to Claim 42, wherein said transfection is conducted on a solid phase or in a liquid phase.

44. (Withdrawn) A method according to Claim 42, wherein said transfection is conducted on a solid support.

45. (Withdrawn) A method according to Claim 1, further comprising the step of comparing a phase of said profile.

46. (Withdrawn) A method according to Claim 1, further comprising the step of subtracting a control profile from the profile of said cell.

47. (Withdrawn) A method according to Claim 1 further comprising the step of processing the profile with a mathematical processing selected from signal processing and multivariate analysis methods.

48. (Withdrawn) A method for presenting profile data relating to information of a cell in the same environment, comprising the steps of:

a) locating a plurality of cells to a support which is capable of maintaining the cells in the same environment;

b) monitoring a biological agent or a collection thereof on or in the cell to produce the profile data of the cell; and

c) presenting the data.

49. (Withdrawn) A method according to Claim 48, wherein said step of presenting is conducted real-time.

50. (Withdrawn) A method according to Claim 48, wherein said step of presenting is conducted such that visual detection is enabled.

51. (Withdrawn) A method according to Claim 48, wherein said step of presenting is conducted such that auditory detection is enabled.

52. (Withdrawn) A method for determining the state of a cell in the same environment, comprising the steps of:

a) locating a plurality of cells to a support which is capable of maintaining the cells in the same environment;

b) monitoring a biological agent or a collection thereof on or in the cell to produce the profile data of the cell; and

c) determining the state of said cell from said data.

53. (Withdrawn) A method according to Claim 52, further comprising the step of correlating said profile and the state of said cell in advance.

54. (Withdrawn) A method according to Claim 52, wherein said cell comprises a cell for which the state thereof is known.

55. (Withdrawn) A method according to Claim 52, wherein there are at least two types of said biological agent.

56. (Withdrawn) A method according to Claim 52, further comprises the step of arbitrarily selecting said biological agent.

57. (Withdrawn) A method according to Claim 52, wherein said data is produced real-time.

58. (Withdrawn) A method according to Claim 52, wherein said status is selected from the group consisting of differentiation state, undifferentiation state, cellular response to a foreign agent, cellular cycle and growth state.

59. (Withdrawn) A method according to Claim 52, wherein said cell is selected from the group consisting of a stem cell and a somatic cell.

60. (Withdrawn) A method according to Claim 52, wherein said solid support comprises a substrate.

61. (Withdrawn) A method according to Claim 52, wherein said biological agent is a nucleic acid molecule, and said cell is transfected with nucleic acid molecule.

62. (Withdrawn) A method according to Claim 61, wherein said transfection is conducted on a solid phase or in a liquid phase.

63. (Withdrawn) A method according to Claim 52, wherein said biological agent has capability of binding a different biological agent.

64. (Withdrawn) A method according to Claim 52, wherein said step of determination c) comprises comparing the phases of said profile.

65. (Withdrawn) A method according to Claim 52, wherein said step of determination c) comprises obtaining difference between said profile and a control profile.

66. (Withdrawn) A method according to Claim 52, wherein said step of determination c) comprises a mathematical processing selected from the group consisting of signal processing and multivariate analysis.

67. (Withdrawn) A method for correlating a foreign agent and a cellular response to the foreign agent, comprising the steps of:

a) subjecting a cell to a foreign agent on a support capable of maintaining a plurality of cell in the same environment;

b) monitoring a biological agent or a collection thereof on or in the cell to produce the profile data of the cell; and

c) correlating the foreign agent and the profile.

68. (Withdrawn) A method according to Claim 68, wherein said cell is immobilized on said support.

69. (Withdrawn) A method according to Claim 69, further comprising the step of using at least two of said foreign agents to obtain profiles to each of the foreign agents.

70. (Withdrawn) A method according to Claim 67, further comprising the step of classifying at least two of said profiles to classify foreign agents corresponding to the profiles.

71. (Withdrawn) A method according to Claim 70, wherein said profile is presented real-time.

72. (Withdrawn) A method according to Claim 67, wherein said cell is cultured on an array.

73. (Withdrawn) A method according to Claim 67, wherein the monitoring of said profile in the step (b) comprises obtaining image data from said array.

74. (Withdrawn) A method according to Claim 67, wherein said correlation between said foreign agent and said profile in the step (c) is the step of identifying the identity or difference of the phase of said profile.

75. (Withdrawn) A method according to Claim 67, wherein said foreign agent is selected from the group consisting of temperature changes, humidity changes, electromagnetic wave, potential difference, visible light, infrared light, ultraviolet light, X-rays, chemical substances, pressure, gravity changes, gas partial pressure and osmotic pressure.

76. (Withdrawn) A method according to Claim 75, wherein said chemical substance is a biological molecule, a chemical synthesized substance or a culture medium

77. (Withdrawn) A method according to Claim 76, wherein said biological molecule is selected from the group consisting of a nucleic acid, a protein, a lipid, a sugar, a proteolipid, a lipoprotein, a glycoprotein and a proteoglycan.

78. (Withdrawn) A method according to Claim 76, wherein said biological molecule comprises at least one biological molecule selected from the group consisting of a hormone, a cytokine, a cell adhesion factor and a extracellular matrix.

79. (Withdrawn) A method according to Claim 75, wherein said chemical substance is an agonist or antagonist of a receptor.

80. (Withdrawn) A method for identifying an unidentified foreign agent given to a cell, from the profile of said cell, comprising the steps of:

a) subjecting a cell to a plurality of known foreign agent on a support capable of maintaining a plurality of cell in the same environment;

b) monitoring a biological agent or a collection thereof on or in the cell over time to produce the profile data of the cell in response to each of known foreign agents to produce profile data of the cell;

c) correlating each of the known foreign agents and each of the profiles;

d) subjecting the cell to an unidentified foreign agent;

e) monitoring a biological agent or a collection thereof on or in the cell subjected to the unknown foreign agent over time to obtain the profile of the cell relating to the unidentified foreign agent;

f) determining the profile corresponding to the profile obtained in step e) amongst the profiles obtained in step b);

g) determining that the unidentified foreign agent is the known foreign agent corresponding to the profile which has been determined in step f).

81. (Withdrawn) A method for identifying an unidentified foreign agent given to a cell, from the profile of the cell, comprising the steps of:

a) providing data relating to correlation between a known foreign agent, and a profile of the cell corresponding to the known foreign agent, with respect to a biological agent or a collection thereof on or in the cell;

b) subjecting the cell to an unidentified foreign agent;

c) monitoring the biological agent or the collection thereof on or in the cell over time to produce a profile of the cell;

d) determining the profile corresponding to the profile obtained in step c) amongst the profiles provided in step a); and

e) determining that the unidentified foreign agent is the known foreign agent corresponding to the determined profile.

82. (Withdrawn) A method for obtaining a profile relating to information of a cell in the same environment, comprising the steps of:

a) locating a plurality of cells to a support which is capable of maintaining the cells in the same environment; and

b) monitoring a biological agent or a collection thereof on or in the cell over time to produce the profile data of the cell.

83. (Withdrawn) A storage medium on which data produced by a method according to Claim 1, is stored.

84. (Withdrawn) A storage medium according to Claim 83, wherein said storage medium further comprises data of at least one information relating to one selected from the group consisting of information relating to conditions under said monitoring, information relating to said profile, information relating to the state of said cell and information relating to the biological agent.

85. (Withdrawn) A storage medium according to Claim 84, wherein the data is stored in a format which links a plurality of the data to each other.

86. (Withdrawn) A storage medium according to Claim 84, wherein the data is stored in a format which has links per said cell.

87. (Withdrawn) Data produced by a method according to Claim 1.

88. (Withdrawn) A transmission medium comprising data produced by a method according to Claim 1.

89. (Withdrawn) A system for producing profile data relating to information of a cell in the same environment, said method comprising:

- a) a support which is capable of maintaining the cells in the same environment;
- b) means for monitoring a biological agent or a collection thereof on or in the cell to produce the profile data of the cell; and
- c) means for producing profile data of the cell from a signal obtained from the means for monitoring.

90. (Withdrawn) A system according to Claim 89, further comprising a plurality of cells, and the plurality of cells are immobilized on to the support.

91. (Withdrawn) A system according to Claim 90, wherein said support is attached at least one substance selected from the group consisting of a salt and an actin acting substance.

92. (Withdrawn) A system according to Claim 89, wherein said means for monitoring comprises at least one means selected from the group consisting of optical microscopes, fluorescence microscopes, phase-contrast microscopes, reading devices using a laser source, means using surface plasmon resonance (SPR) imaging, electric signals, chemical or biochemical markers singly or in combination, radiation, confocal microscopes, nonconfocal microscopes, differential interference microscopes, stereoscopic microscopes, video monitors and infrared cameras.

93. (Withdrawn) A system for presenting profile data relating to information of a cell in the same environment, comprising:

- a) a support which is capable of maintaining the cells in the same environment;
- b) means for monitoring a biological agent or a collection thereof on or in the cell to produce the profile data of the cell;

c) means for producing profile data of the cell from a signal obtained from the means for monitoring; and

d) means for presenting the data.

94. (Withdrawn) A system according to Claim 93, further comprising a plurality of cells, and the plurality of cells being immobilized on to the support.

95. (Withdrawn) A system according to Claim 93, wherein said support is attached at least one substance selected from the group consisting of a salt and an actin acting substance.

96. (Withdrawn) A system according to Claim 93, wherein said means for monitoring comprises at least one means selected from the group consisting of optical microscopes, fluorescence microscopes, phase-contrast microscopes, reading devices using a laser source, means using surface plasmon resonance (SPR) imaging, electric signals, chemical or biochemical markers singly or in combination, radiation, confocal microscopes, nonconfocal microscopes, differential interference microscopes, stereoscopic microscopes, video monitors and infrared cameras.

97. (Withdrawn) A system according to Claim 93, wherein said means for presenting data is a display.

98. (Withdrawn) A system according to Claim 93, wherein said means for presenting data is a speaker.

99. (Withdrawn) A system for determining the state of a cell in the same environment, comprising

a) support which is capable of maintaining the cells in the same environment;

b) means for monitoring a biological agent or a collection thereof on or in the cell to produce the profile data of the cell;

c) means for producing profile data of the cell from a signal obtained from the means for monitoring; and

d) means for determining the state of said cell from said data.

100. (Withdrawn) A system for correlating a foreign agent and a cellular response to the foreign agent, comprising:

a) a support capable of maintaining a plurality of cell in the same environment;

b) means for subjecting a foreign agent;

c) monitoring a biological agent or a collection thereof on or in the cell to produce the profile data of the cell;

d) means for producing profile data of the cell from a signal obtained from the means for monitoring; and

e) means for correlating the foreign agent and the profile.

101. (Withdrawn) A system for identifying an unidentified foreign agent given to a cell, from the profile of said cell, comprising:

a) a support capable of maintaining a plurality of cell in the same environment;

b) means for subjecting a known foreign agent;

c) means for monitoring a biological agent or a collection thereof on or in a cell over time;

- d) means for obtaining the profile data of the cell in response to each of known foreign agents to produce profile data of the cell;
- e) means for correlating each of the known foreign agents and each of the profiles;
- f) means for subjecting an unknown foreign agent;
- g) means for comparing the profile of the known foreign agent obtained with means d), and the profile of the unknown foreign foreign agent to determine a profile corresponding to the profile of the unknown foreign agent amongst the profiles of the known foreign agents, wherein said determined unidentified foreign agent is the known foreign agent for which the determined profile corresponds to.

102. (Withdrawn) A system for identifying an unidentified foreign agent given to a cell, from the profile of the cell, comprising:

- a) a storage medium having stored data relating to correlation between a known foreign agent, and a profile of the cell corresponding to the known foreign agent, with respect to a biological agent or a collection thereof on or in the cell;
- b) means for subjecting the cell to an unidentified foreign agent;
- c) a support which is capable of maintaining a plurality of cells in the same environment;
- d) means for monitoring the biological agent or the collection thereof on or in the cell over time to produce a profile of the cell;
- e) means for obtaining the profile of the cell from a signal obtained from the means for monitoring; and
- f) means for determining the profile corresponding to the profile obtained relating to the unidentified foreign agent amongst the profiles stored in the storage medium a),

wherein the unidentified foreign agent is the known foreign agent for which the determined profile corresponds to.

103. (Withdrawn) A support capable of immobilizing a plurality of cells and maintaining the cells in the same environment.

104. (Withdrawn) A support according to Claim 103, whererin the cells on the support are located in an array format.

105. (Withdrawn) A support according to Claim 103 comprising a complex of a positively charged substance and a negatively charged substance; a salt; or an actin acting substance.

106. (Withdrawn) A support according to Claim 103 comprising a complex of a positively charged substance and a negatively charged substance; a salt; and an actin acting substance.

107. (Withdrawn) A support according to Claim 103, wherein said claim is capable of being located with a space with 1 mm or less at maximum.

108. (Withdrawn) A support according to Claim 103, further comprising a cell immobilized thereon.

109. (Withdrawn) A support according to Claim 103, further comprising a biological agent immobilized thereon.

110. (Withdrawn) A support according to claim 109, wherein two or more types of said biological agents are immobilized thereon.

111. (Withdrawn) A support according to Claim 103, wherein a cell and a biological agent are immobilized thereon.

112. (Withdrawn) A support according to Claim 103, wherein a salt; a complex between a positively charged substance and a negatively charged substance; and an actin acting substance are immobilized thereon together with a cell and a biological agent.

113. (Withdrawn) A support according to Claim 103, wherein a salt; a complex between a positively charged substance and a negatively charged substance; and an actin acting substance are immobilized thereon together with a cell and a biological agent, in an array format.

114. (Withdrawn) A support according to Claim 104, wherein a salt, a gene introduction reagent, and an actin acting substance, a nucleic acid molecule, and a cell are immobilized thereon in an array format.

115. (Withdrawn) A support according to Claim 114, wherein the salt is selected from the group consisting of calcium chloride, sodium hydrogen phosphate, sodium hydrogen carbonate, sodium pyruvate, HEPES, calcium chloride, sodium chloride, potassium chloride, magnesium sulfide, iron nitrate, amino acids, and vitamins.

116. (Withdrawn) A support according to Claim 114, wherein the gene introduction reagent is selected from the group consisting of cationic polymers, cationic lipids, polyamine-based reagents, polyimine-based reagents, calcium phosphate, oligofectamine and oligofector.

117. (Withdrawn) A support according to Claim 114, wherein the actin acting substance comprises at least one protein selected from the group consisting of fibronectin, laminin, and vitronectin, or a variant or fragment thereof.

118. (Withdrawn) A support according to Claim 114, wherein the nucleic acid molecule comprises a sequence encoding a protein selected from the group consisting of cytokines, hormones, cell adhesion molecules, cytoskeleton proteins and enzymes.

119. (Withdrawn) A support according to Claim 114, wherein the cell comprises a cell selected from the group consisting of an animal cell, an insect cell, a plant cell, a bacterial cell and a fungal cell.

120. (Withdrawn) A support according to Claim 114 wherein material of said support comprises material selected from the group consisting of glass, silica and plastics.

121. (Withdrawn) A method for producing a support comprising a plurality of cells immobilized thereon and capable of maintaining the cells in the same environment, comprising the steps of:

A) providing a support; and

B) immobilizing a cell to the support using a complex compsiteing a salt, a positively-charged sbustance and a negatively-charged substance.

122. (Withdrawn) A method according to Claim 121, wherein said step of immobilizing comprising immobilizing a mixture of the salt, a gene introduction reagent as the positively-charged sbustance, , an actin acting substance, a nucleic acid molecule as the negatively-charged substance, and the cell in an array format.

123. (Withdrawn) A method according to Claim 121, said step of immobilizing comprising the step of printing.

124. (Withdrawn) A method according to Claim 121, wherein the step of providing the support comprises the step of producing the support from a support material.

125. (Withdrawn) An apparatus for producing a support comprising a plurality of cells immobilized thereon and capable of maintaining the cells in the same environment, comprising:

A) means for providing a support; and

B) means for immobilizing a cell to the support using a complex compsiteing a salt, a positively-charged sbustance and a negatively-charged substance.

126. (Withdrawn) An apparatus according to Claim 125, said means for immobilizing comprising the means for printing.

127. (Withdrawn) An apparatus according to Claim 125, wherein the means for providing the support comprises the means for shaping the support from a support material.

128.-132. (Canceled)

133. (Currently Amended) An apparatus for producing a digital cell, comprising:

a) means for obtaining a cell parameter specifying a cell of experimental interest;

b) means for obtaining an environment parameter specifying environment under which the cell specified by the cell parameter is cultured;

c) means for obtaining a stimulus parameter specifying a stimulus to be given to the cell specified by the cell parameter;

d) means for obtaining a stimulus response result showing a result which the cell specified by the cell parameter responds to the stimulus specified by the stimulus parameter under the environment specified by the environment parameter wherein the stimulus response comprises profile data for the cell obtained by monitoring a biological agent or a collection thereof on or in the cell over time, and wherein during the monitoring, the cell is immobilized to a support by a composition comprising a salt, and ~~an actin-like acting substance~~
29kDa fragment of fibronectin;

e) means for producing an experimental data against the cell, by correlating the cell parameter, the environement environment parameter, the stimulus parameter and the stimulus response result; and

f) means for providing at least one collection of experimental data as a digital cell, by optionally repeating steps performed by the means a) through e) to produce at least one collection of experimental data against the cell,

wherein the apparatus further comprises a means for storing the at least one collection of experimental data against the cell.

134.-135. (Canceled)

136. (Currently Amended) A computer system for providing a service which reproduces an experimental result on an actual cell using a digital cell produced by the apparatus of claim 133, comprising:

a service requester being composed such that it can have access to a database having at least one digital cell stored thereon, each of the at least one digital cell is expressed as a collection of at least one experimental data on a cell of experimental interest, wherein each of the at least one experimental data comprises a cell parameter specifying the cell, an environment parameter specifying an environment under which the cell specified by the cell parameter is culture, a stimulus parameter specifying a stimulus to be given to the cell specified by the cell parameter, and a stimulus response result showing a result which the cell specified by the cell parameter responds to the stimulus specified by the stimulus parameter under the environment specified by the environment parameter; and

a service provider requesting a service desired by a user;

wherein the service requester comprises:

means for receiving the cell parameter, the environment parameter and the stimulus parameter to produce a request comprising the cell parameter, the environment parameter and the stimulus parameter; and

means for providing the request to the service provider, and

wherein the service provider comprises:

means for searching the database in response to the request by the service provider to determine whether or not there is the stimulus response result relating to the cell parameter, the environment parameter and the stimulus parameter included in the request in the database; and

means for providing the stimulus response result to the service requester by the service provider, when determined that there exists the stimulus response result relating to the cell parameter, the environment parameter and the stimulus parameter included in the request in the database;

wherein the service requester further comprises

means for presenting the stimulus response result by the service requester.

137. (Currently Amended) A computer system according to Claim 136
| wherein the service requester is a Web browser which the user operates, the service provider is a Web server linked to the service requester via the Internet.

138. (Original) A computer system according to Claim 136, wherein the service requester provides the request to the service provider in a format described in the XML language.

139. (Original) A computer system according to Claim 136, wherein the service provider provides the stimulus response result to the service requester in a format described in the XML language.

140. (Currently Amended) A computer system for providing a service which reproduces an experimental result on an actual cell using a digital cell produced by the apparatus of claim 133, comprising:

a plurality of service providers, each composed such that the plurality of service providers can have access to a database having at least one digital cell stored thereon, each of the at least one digital cell is expressed as a collection of at least one experimental data on a cell of experimental interest, wherein each of the at least one experimental data comprises a cell parameter specifying the cell, an environment parameter specifying an environment under which the cell specified by the cell parameter is cultured, a stimulus parameter specifying a stimulus to be given to the cell specified by the cell parameter, and a stimulus response result showing a result which the cell specified by the cell parameter responds to the stimulus specified by the stimulus parameter under the environment specified by the environment parameter;

a service registry which stores at least one service which the plurality of service providers can provide; and

a service provider requesting a service desired by a user;

wherein the service requester comprises:

means for receiving the cell parameter, the environment parameter and the stimulus parameter to produce a request comprising the cell parameter, the environment parameter and the stimulus parameter;

means for searching the service registry in response to the request by the service requester to determine whether or not there exists a service provider capable of providing a service of the request amongst the plurality of service providers and

means for providing the request to the service provider by the service requester when determined that there exists a service provider capable of providing a service of the request amongst the plurality of service providers,

wherein each of the plurality of service providers comprises:

means for searching the database in response to the request by the service provider to determine whether or not there is the stimulus response result relating to the cell parameter, the environment parameter and the stimulus parameter included in the request in the database; and

means for providing the stimulus response result to the service requester by the service provider, when determined that there exists the stimulus response result relating to the cell parameter, the environment parameter and the stimulus parameter included in the request in the database;

wherein the service requester further comprises

means for presenting the stimulus response result by the service requester.

141. (Original) A computer system according to Claim 140, wherein the service requester is a Web server connected to a Web browser which the user operates via the Internet, each of the plurality of service providers is a Web server connected to the service requester via the Internet.

142. (Original) A computer system according to Claim 140, wherein the service requester provides the request to the service provider in a format described in the XML language.

143. (Original) A computer system according to Claim 140, wherein the service provider provides the stimulus response result to the service requester in a format described in the XML language.

144. (Withdrawn) A method for producing the profile data relating information of a cell, comprising the steps of:

- a) immobilizing and locating a cell on a support; and
- b) monitoring a biological agent or a collection thereof on or in the cell to produce the profile data of the cell.